

March 22, 2002

Bob Heffner
AMFAB, L.L.C.
25161 Leer Drive
Elkhart, IN 46514-5426

Re: Registered Construction and Operation Status
039-15613-00389

Dear Mr. Heffner:

The application from AMFAB, L.L.C., received on February 18, 2002, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that your emission source, a metal products fabrication shop located at 25161 Leer Drive, Elkhart, IN 46514-5426, is classified as registered. This emission source consists of the following facilities:

- (a) Two (2) natural gas-fired furnaces, each rated at 0.05 million Btu per hour.
- (b) One (1) natural gas-fired air makeup unit rated at 2.9 million Btu per hour.
- (c) Two (2) natural gas-fired furnaces, each rated at 0.105 million Btu per hour.
- (d) Two (2) natural gas-fired furnaces, each rated at 0.092 million Btu per hour.
- (e) Nineteen (19) natural gas-fired radiant heaters, each rated at 0.105 million Btu per hour.
- (f) Three (3) cold cleaner degreasers.
- (g) One (1) paint spray booth, with particulate emissions controlled by dry filters.
- (h) Three (3) plasma cutting operations, controlled by a baghouses identified as D1 through D3.
- (i) One (1) laser cutting operation controlled by a rotoclone identified as RC1.
- (j) Eight (8) metal inert gas (MIG) welding stations.
- (k) Five (5) tungsten inert gas (TIG) welding stations.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), particulate matter (PM) emissions shall be limited by the following equation for process weight rates up to sixty thousand (60,000) pounds per hour:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

For a process weight rate of 0.78 tons per hour, this equation provides an emission limit of 3.47 pounds per hour.

2. Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:
 - (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- 3. Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating, as applied, shall be limited to 3.5 pounds of VOC per gallon of coating less water for air-dried coatings.
- 4. Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operation), the owner or operator of a cold cleaning facility shall:
 - (a) equip the cleaner with a cover;
 - (b) equip the cleaner with a facility for draining cleaned parts;
 - (c) close the degreaser cover whenever parts are not being handled in the cleaner;
 - (d) drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
 - (e) provide a permanent, conspicuous label summarizing the operating requirements;
 - (f) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

This registration is the second air approval issued to this emission source. All prior approvals are now considered obsolete as they have been included in this registration. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

Any change or modification which may increase the potential pollutant emissions to 25 tons per year or more from the equipment covered in this registration must be approved by the Office of Air Quality (OAQ) before such change may occur.

Sincerely,

Original signed by Paul Dubenetzky

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ARD

cc: File - Elkhart County
Elkhart County Health Department
IDEM - Northern Regional Office
Air Compliance Section Inspector - Paul Karkiewicz
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

Company Name:	AMFAB, L.L.C.
Address:	25161 Leer Drive
City:	Elkhart, IN 46514-5426
Authorized individual:	
Phone #:	
Registration #:	039-15613-00389

I hereby certify that AMFAB, L.L.C. is still in operation and is in compliance with the requirements of Registration 039-15613-00389.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	AMFAB, L.L.C.
Source Location:	25161 Leer Drive, Elkhart, IN 46514-5426
County:	Elkhart
SIC Code:	3444
Application No.:	039-15613-00389
Reviewer:	Allen R. Davidson

On February 18, 2002, the Office of Air Quality (OAQ) received an application from AMFAB, L.L.C. relating to the operation of a metal products fabrication shop located at 25161 Leer Drive, Elkhart, IN 46514-5426. This emission source consists of the following facilities:

- (a) Two (2) natural gas-fired furnaces, each rated at 0.05 million Btu per hour.
- (b) One (1) natural gas-fired air makeup unit rated at 2.9 million Btu per hour.
- (c) Two (2) natural gas-fired furnaces, each rated at 0.105 million Btu per hour.
- (d) Two (2) natural gas-fired furnaces, each rated at 0.092 million Btu per hour.
- (e) Nineteen (19) natural gas-fired radiant heaters, each rated at 0.105 million Btu per hour.
- (f) Three (3) cold cleaner degreasers.
- (g) One (1) paint spray booth, with particulate emissions controlled by dry filters.
- (h) Three (3) plasma cutting operations, controlled by a baghouses identified as D1 through D3.
- (i) One (1) laser cutting operation controlled by a rotoclone identified as RC1.
- (j) Eight (8) metal inert gas (MIG) welding stations.
- (k) Five (5) tungsten inert gas (TIG) welding stations.

History

AMFAB, L.L.C. was issued a registration for a metal products fabrication shop on May 21, 1996. This application is the first revision since that date. No operational changes are being made at the shop. However, 326 IAC 2-5.5-2(b) requires existing emission sources with a valid air registration to reapply for approval. This application seeks to comply with this rule.

Enforcement Issues

This application to reapply for a registration was received after December 25, 2000, an alleged violation of 326 IAC 2-5.5. OAQ has referred the issue to the Office of Enforcement for possible action. There are no other enforcement actions pending against this emission source.

Stack Summary

Stack information will not be changed as a result of this application.

Recommendation

The staff recommends to the Commissioner that the emission source be issued another registration. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on February 18, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations. (4 pages)

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

The following table reflects the existing source potential to emit. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit:

Pollutant	Potential To Emit (tons/year)
PM	5.69
PM-10	5.69
SO ₂	0
VOC	10.0
CO	2.0
NO _x	2.4

HAP's	Potential To Emit (tons/year)
Ethylbenzene	1.17
Xylene	6.70
Cobalt Compounds	0.05
TOTAL	7.92

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) xylene, a hazardous air pollutant (HAP), is not equal to or greater than ten (10) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

The potential to emit particulate matter (PM) and volatile organic compounds (VOC) are both less than 25 tons per year. However, the potential to emit PM is equal to or greater than five tons per year, and the potential to emit VOC is equal to or greater than ten tons per year. Therefore, the source is classifiable as a registration under 326 IAC 2-5.5.

County Attainment Status

The source is located in Elkhart County:

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment (maintenance)
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone and for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

This emission source is not a major source for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 because the increase in potential to emit every attainment pollutant is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14 and 40 CFR Part 63) applicable to this source. This source is not subject to the requirements of NESHAP Subpart T since no halogenated solvents are used.

State Rule Applicability - Entire Source

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

This source is not subject to 326 IAC 2-4.1-1 (New Source Toxics Control). It does not have potential emissions, before controls, of 10 tons per year of any HAP or 25 tons per year of any combination of HAPs.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because:

- (a) Although it is located in one of the eight counties listed in the rule, it does not have the potential to emit more than ten (10) tons per year of volatile organic compounds or nitrogen oxides.
- (b) It does not have the potential to emit more than one hundred (100) tons per year of any other pollutant specified in the rule.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Natural Gas Combustion Units

There are no state rules applicable to these facilities.

State Rule Applicability - Spray Booth

326 IAC 8-2-9 (Miscellaneous Metal Coating)

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the spray booth shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for air-dried coatings.

Based on the MSDS submitted by the source and calculations made, the spray booth is in compliance with this requirement.

326 IAC 6-3-2 (Particulate Emissions Limitations)

This emission unit is subject to 326 IAC 6-3-2. Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), particulate matter (PM) emissions shall be limited by the following equation for process weight rates up to sixty thousand (60,000) pounds per hour:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The control equipment is not required in order to comply with this limit.

State Rule Applicability - Degreasers

326 IAC 8-3-2 (Cold Cleaner Operation)

This facility is subject to 326 IAC 8-3-2. Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operation), the owner or operator of a cold cleaning facility shall:

- (a) equip the cleaner with a cover;
- (b) equip the cleaner with a facility for draining cleaned parts;
- (c) close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) provide a permanent, conspicuous label summarizing the operating requirements;
- (f) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

This facility is not subject to 326 IAC 8-3-5 since the degreasers contain remote solvent reservoirs.

State Rule Applicability - Welding, Flame Cutting and Laser Cutting

326 IAC 6-3-2 (Particulate Emissions Limitations)

This emission unit is subject to 326 IAC 6-3-2. Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), particulate matter (PM) emissions shall be limited by the following equation for process weight rates up to sixty thousand (60,000) pounds per hour:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

For a process weight rate of 0.78 tons per hour, this equation provides an emission limit of 3.47 pounds per hour. The control equipment is not required in order to comply with this limit.

Conclusion

The operation of these facilities shall be subject to the conditions of the attached registration, No 039-15613-00389.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: AMFAB, LLC
Address City IN Zip: 25161 Leer Drive, Elkhart IN 46514-5426
ID: 039-15613-00389
Reviewer: Allen R. Davidson
Date: 03/25/02

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

5.389

47.2

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.0	0.2	0.0	2.4	0.1	2.0

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	4.957E-05	2.832E-05	1.770E-03	4.249E-02	8.025E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.180E-05	2.596E-05	3.305E-05	8.969E-06	4.957E-05

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98).

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factor: confirm that the correct factor is used (i.e., condensable included/not included).

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations**

Company Name: AMFAB, L.L.C
Address City IN Zip: 25161 Leer Drive, Elkhart, IN 46514-5426
ID: 039-15613-00389
Reviewer: Allen R. Davidson
Date: 03/25/02

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Black, Quick Dry 350	9.76	38.40%	4.69%	33.71%	0.00%	0.00%	0.00500	120.000	3.29	3.29	1.97	47.38	8.65	3.95	ERR	75%
Xylol (Cleaner)	7.17	100.00%	0.00%	100.00%	0.00%	0.00%	0.00025	120.000	7.17	7.17	0.22	5.16	0.94	0.00	ERR	75%

State Potential Emissions	Add worst case coating to all solvents	2.19	52.54	9.59	3.95
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METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

The following calculations determine the emission limit under 326 IAC 6-3-2:

$$E = 4.1 * (0.780 ^{0.67}) = 3.47 \text{ lb/hr}$$

$$3.47 \text{ lb/hr} * 8760 \text{ hr/yr} / 2000 \text{ lb/ton} = 15.20 \text{ ton/yr}$$

The following calculations determine VOC emissions from degreasing, based on data supplied by the applicant:

$$\frac{0.252 \text{ gal/day} * 6.8 \text{ lb/gal} * 365 \text{ day/yr}}{2000 \text{ lb/ton}} = 0.31 \text{ ton/yr}$$

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: AMFAB, L.L.C
Address City IN Zip: 25161 Leer Drive, Elkhart, IN 46514-5426
ID: 039-15613-00389
Reviewer: Allen R. Davidson
Date: 03/25/02

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % HAP#1	Weight % HAP#2	Weight % HAP#3	Weight % HAP#4	Weight % HAP#5	Weight % HAP#6	Weight % HAP#7	Emissions HAP#1 (ton/yr)	Emissions HAP#2 (ton/yr)	Emissions HAP#3 (ton/yr)	Emissions HAP#4 (ton/yr)	Emissions HAP#5 (ton/yr)	Emissions HAP#6 (ton/yr)	Emissions HAP#7 (ton/yr)
Black, Quick Dry 350	9.76	0.00500	*****	23.00%	4.00%	0.20%	0.00%	0.00%	0.00%	0.00%	5.90	1.03	0.05	0.00	0.00	0.00	0.00
Xylol (Cleaner)	7.17	0.00025	*****	85.00%	15.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.80	0.14	0.00	0.00	0.00	0.00	0.00

Total State Potential Emissions											6.70	1.17	0.05	0.00	0.00	0.00	0.00
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METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

LEGEND

- HAP#1 = Xylene
- HAP#2 = Ethyl Benzene
- HAP#3 = Cobalt Compounds
- HAP#4 = n/a
- HAP#5 = n/a
- HAP#6 = n/a
- HAP#7 = n/a

Appendix A: Emissions Calculations
Welding and Thermal Cutting

Company Name: AMFAB, L.L.C
Address City IN Zip: 25161 Leer Drive, Elkhart, IN 46514-5426
ID: 039-15613-00389
Reviewer: Allen R. Davidson
Date: 03/25/02

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)		EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING												
Submerged Arc				0.036	0.011			0.000	0.000	0.000	0	0.000
Metal Inert Gas (MIG)(carbon steel)	8	4		0.0055	0.0005			0.176	0.016	0.000	0	0.016
Stick (E7018 electrode)				0.0211	0.0009			0.000	0.000	0.000	0	0.000
Tungsten Inert Gas (TIG)(carbon steel)	5	5		0.0055	0.0005			0.138	0.013	0.000	0	0.013
Oxyacetylene(carbon steel)				0.0055	0.0005			0.000	0.000	0.000	0	0.000
FLAME CUTTING	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)**				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Oxyacetylene				0.1622	0.0005	0.0001	0.0003	0.000	0.000	0.000	0.000	0.000
Oxymethane				0.0815	0.0002		0.0002	0.000	0.000	0.000	0.000	0.000
Plasma**	2	0.5	80	0.0039				0.037	0.000	0.000	0.000	0.000
EMISSION TOTALS												
Potential Emissions lbs/hr								0.35				0.03
Potential Emissions lbs/day								8.42				0.68
Potential Emissions tons/year								1.54				0.12

METHODOLOGY

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

**Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted). Therefore, the emission factor for plasma cutting is for 8 mm thick rather than 1 inch, and the maximum metal thickness is not used in calculating the emissions.

Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick
 Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)
 Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)
 Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)
 Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
 Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.
 Welding and other flame cutting emission factors are from an internal training session document, "Welding and Flame Cutting". See Rebecca Mason if you need a copy.
 Refer to AP-42, Chapter 12.19 for additional emission factors for welding.